XL2 Digital Video Camera

Canon

advanced simplicity®

The ultimate 3CCD DV camera system

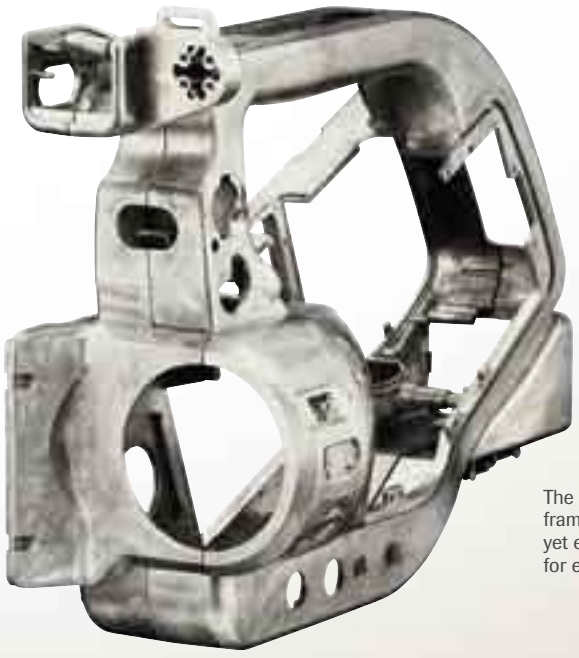
for creative film-making.

No more limits.

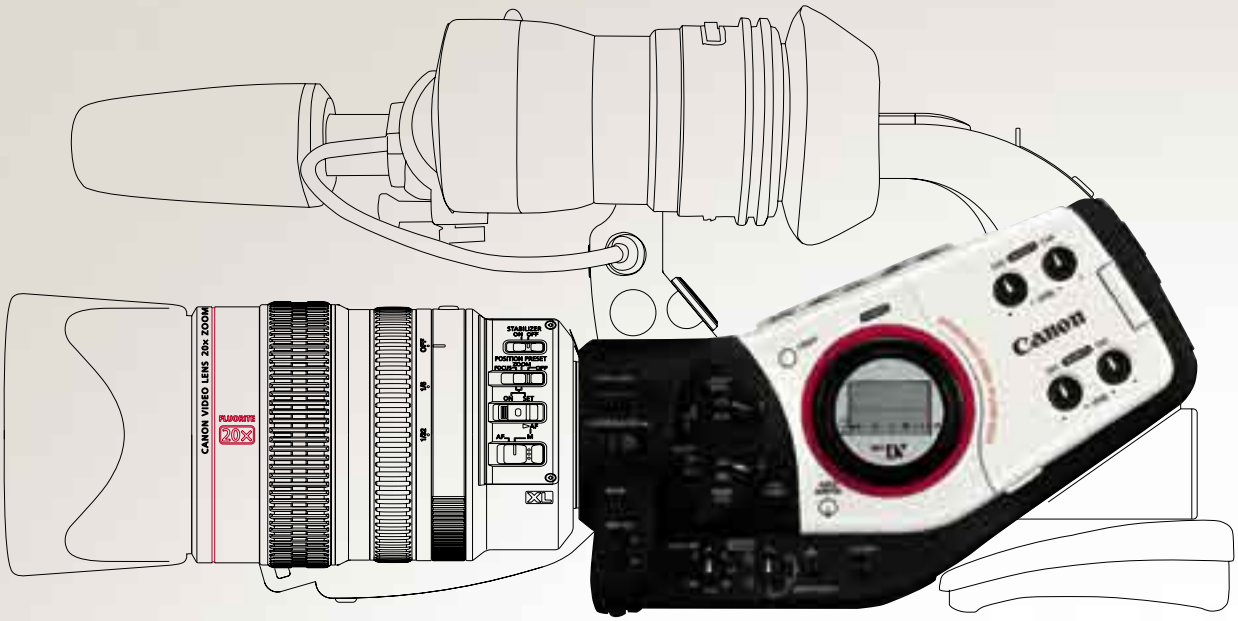
Canon's XL2 is more than just a successor to the popular XL1s – it's a revolution in digital video camera freedom.

The design concept is based on the successful 'open architecture' structure of its predecessor, with innovation upon innovation added to produce a broadcast quality digital video camera of unprecedented flexibility. The XL2 gives you total control over virtually all of your shooting parameters for an unrestricted creative experience like no other. Incorporating many new features normally only found in a post-production studio, this supremely advanced MiniDV format video camera is the flagship of Canon's range. And with Canon's XL-series interchangeable lens system providing consistently stunning picture quality, there's no limit to what you can achieve.

- Unprecedented level of manual control
- Pro-Quality 16:9 capability
- 25p progressive scan Cine-Look
- 3CCD 800,000 pixel sensor with horizontal pixel shift
- Optical 20x Zoom lens with precision circular iris and SuperRange Optical Image Stabilizer
- Interchangeable lens system compatible with EOS EF-lenses and L-series video lens with fluorite elements
- 2 XLR jacks with phantom power supply and BNC jack
- SMPTE time code



The XL2's magnesium alloy frame is tough and durable, yet extremely lightweight for easy portability.



Technology that pushes the possibilities.

Push your imagination to the limit. With cutting-edge technology and Canon quality image processing, the XL2 not only gives you the ability to realise your creative vision, but inspires you to expand it even further.

The new high sensitivity 1/3" 3CCD achieves 625 lines of horizontal resolution.

PROGRESSIVE SCAN 3CCD

The XL2's superb image quality is largely due to its three highly sensitive 1/3" progressive CCD sensors. With one 800,000 pixel (approx.) sensor dedicated to each of the primary colours – Red, Green and Blue – the XL2 can capture an outstanding level of detail and reproduce colours with greater accuracy. Using 3rd generation DSP signal processing LSI technology, the XL2 achieves 625 lines of progressive scan capability. When compared to standard interlaced scanning, there is a noticeably improved S/N ratio, wider dynamic range, lower colour noise, more natural colour resolution and lower aliasing. The XL2's unique 25p Cine-Look mode delivers output that's optimal for composite processing as well as offering a better vertical screen resolution and higher detail without flicker.

TOTAL MANUAL CONTROL

Whatever you're shooting, the more creative control you have the better. The XL2 offers a level of manual control that is unprecedented in its segment and is sure to surprise even the most experienced filmmaker or videographer. Virtually every single shooting parameter is adjustable – from separate Red, Green and Blue Gain settings to Master Pedestal, Coring and V Detail – giving you the flexibility to shoot any given scene in an infinite number of ways.

4:3

16:9

Pro-Quality 16:9 mode gives you incredible resolution in a wide format aspect ratio from a 4:3 sensor size.

PRO-QUALITY 16:9

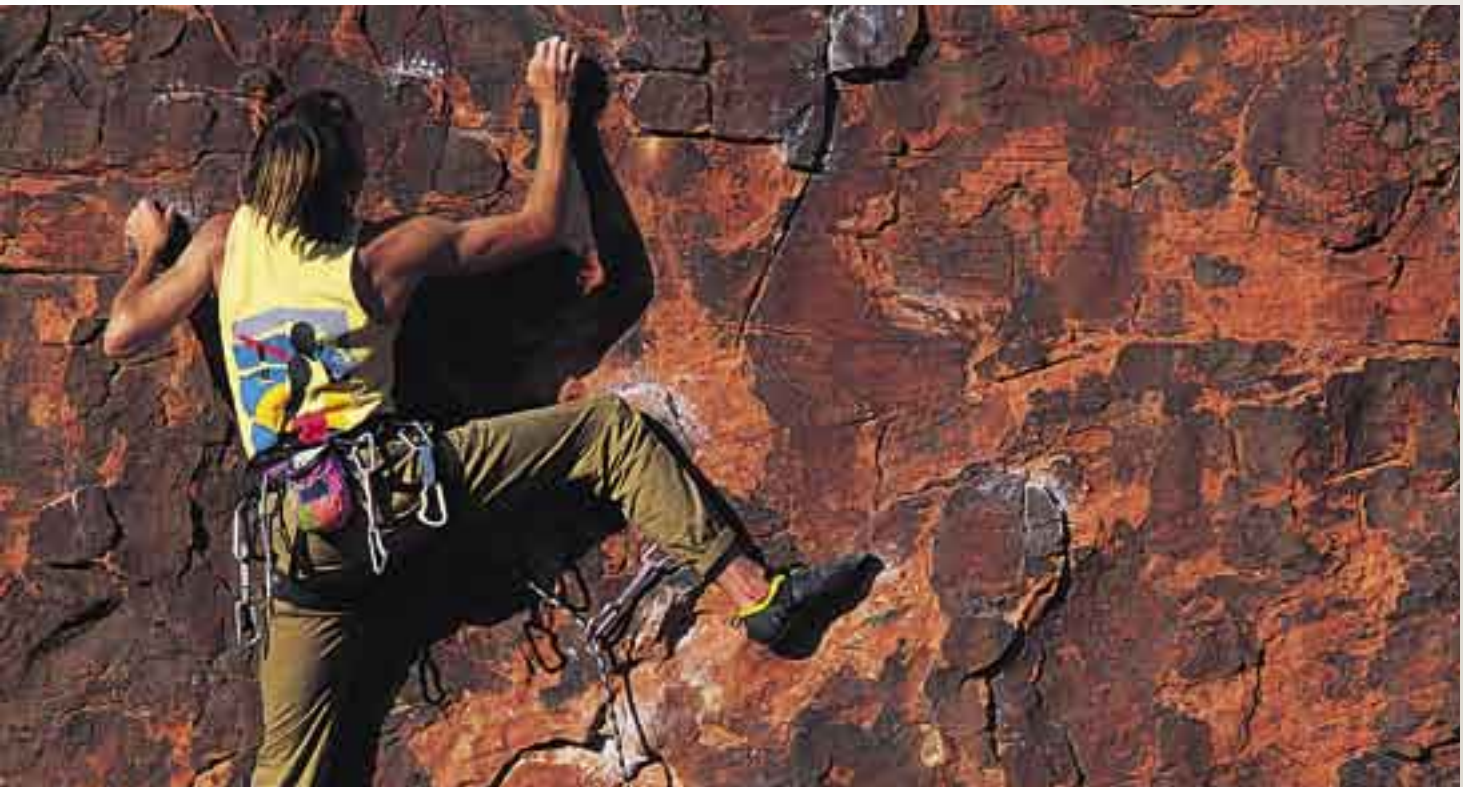
With this new recording mode, the XL2 can maximize the captured information to deliver a professional quality 16:9 aspect ratio. Even though its CCD sensors are standard 4:3 size, the quality of its 16:9 mode is equal to that of a true 16:9 CCD sensor. When recording in this mode you can view the results directly on the LCD/EVF in letterbox format.

CINE-LOOK/VIDEO RECORDING

The XL2 is capable of more than just crystal clear video output. With its unique Cine-Look capability you can also shoot footage with a genuinely warm, cinematic quality. In 25p recording mode it captures video at 25 frames per second for a true cinematic feel. When combined with the wide range of adjustable functions (Gamma, Knee and Black Stretch adjustments as well as Colour Matrix, V Detail, Skin Detail and Film Grain functions), the effect is truly remarkable. For a cooler 'video' feel, the 50i recording mode is pin-sharp and gives you just as much freedom when configuring the parameters of each shot.

HORIZONTAL PIXEL SHIFT

With this feature the images captured by the three CCD's (Red, Green and Blue) are not placed exactly over each other. The green pixels are shifted slightly horizontally in order to provide a composite image with a higher resolution.

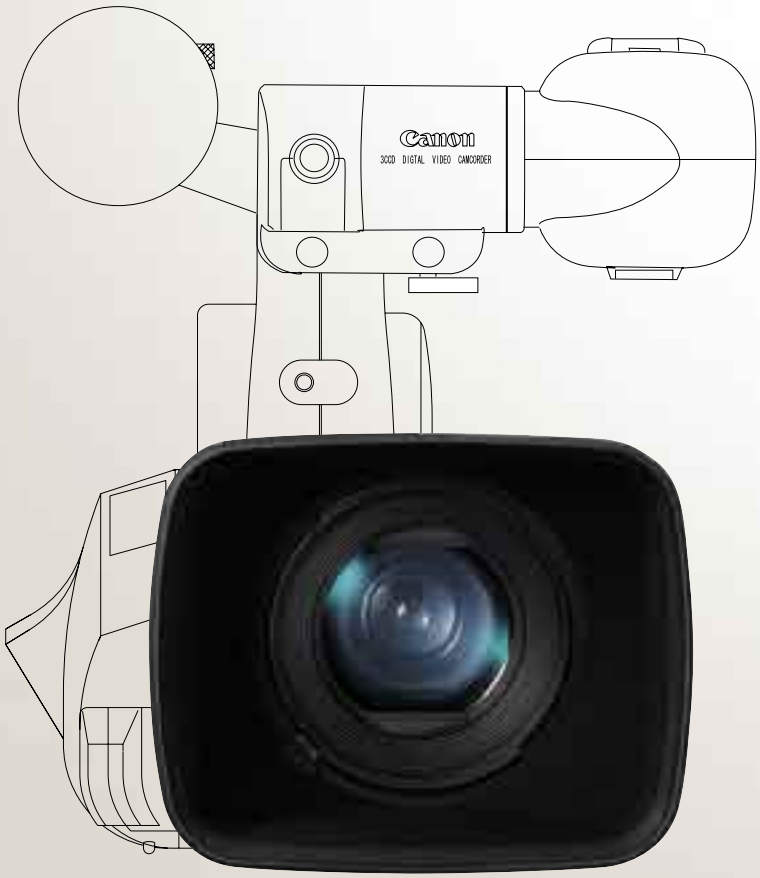


Lenses to expand your vision.

The XL2 is designed primarily for the high performance XL interchangeable lens system, but is also easily fitted with an optional EF adapter to make full use of Canon's pro-quality L-series EF lenses. Manual focus is possible with all capable lenses and in all shooting modes. When combined with the variety of professional presets and filters available, as well as the remarkable Vari-Angle Prism (VAP) Optical Image Stabilizer, this video camera system is capable of virtually anything.

NEW 20X L-SERIES ZOOM LENS

Developed exclusively for the XL2, the XL 5.4-108mm L IS lens is composed of 12 lens elements in 10 groups, delivering a focal length range of 41.4 to 828mm in Pro-Quality 16:9 mode. It incorporates Canon's SuperRange Optical Image Stabilizer, an L-series Fluorite lens and two aspherical lens elements to deliver consistently sharp images and true colours. Two built-in ND filters allow you to adjust the light intensity without affecting the colours.



The lens' six iris aperture leaves have nearly circular shaped blades that create a beautifully natural blurring effect when shooting a short depth of field. This brilliant new lens fully supports manual focus functionality and comes as standard with the XL2 kit.

XL-SERIES INTERCHANGEABLE LENSES

Using the specially designed XL mount that supports the 1/3" 3CCD system, this series of three lenses provides a 35mm equivalent focal length range from 26.6 to 1018mm. The new 20x Zoom is a perfect multi-purpose lens. The 3x Zoom Video lens and 16x Zoom Manual lens offer even more creative flexibility. All are designed and engineered exclusively by Canon – making full use of more than 70 years of experience in the field.

CANON PROFESSIONAL EOS LENSES

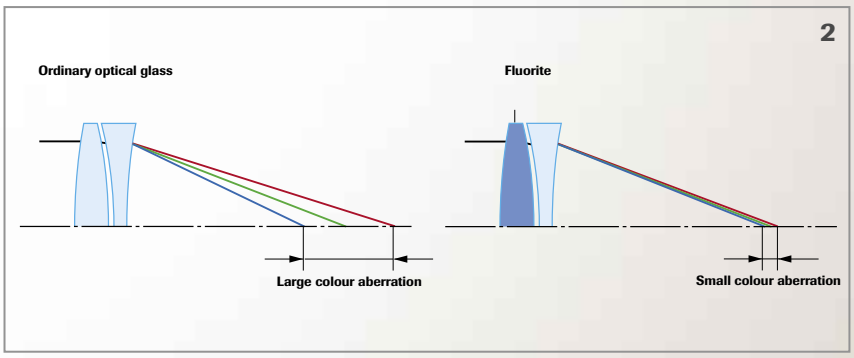
The optional EF adapter gives you access to the full spectrum of Canon's Professional 35mm L-Series EF lenses. This collection of lenses has proven to be essential for any serious photographer and invaluable to many filmmakers and videographers. They are particularly useful for sports, wildlife and astronomy applications as their magnification increases by approximately 7.2x when mounted on the XL2.

SUPERRANGE OPTICAL IMAGE STABILIZER

Using Canon's unique Vari-Angle Prism (VAP) technology, the SuperRange system not only uses a gyro sensor to minimise vibration but subsequently analyses the image once it's received by the CCD. This allows for better compensation of low frequency band vibrations. The XL2 uses vector data from the gyro sensor to control the angle of the VAP in order to continuously correct the path of the incoming light.
It then examines the image on the CCD to refine the prism's movements. The new XL2 20x Zoom lens incorporates this technology, which works in standard 4:3 as well as Pro-Quality 16:9 mode.

L-SERIES FLUORITE LENS ELEMENTS

The new XL2 20x Zoom lens includes a professional L-Series Fluorite lens element. These incredible crystalline based elements are grown especially for professional 35mm and broadcast lenses because of their ability to minimise colour aberration during high magnification.
The XL2's lens also includes two aspherical lens elements that allow it to achieve a more compact profile whilst maintaining the highest standard of optical performance.



1. Any camera shake sensed via the XL2's Vibration Sensor is compensated for using the Optical Image Stabilizer's Vari-Angle Prism.

2. The XL2's professional lens employs Fluorite lens elements to reduce image aberrations.

ZOOM / FOCUS PRESETS

The new XL2 20x Zoom lens supports both focus and zoom position presets, a feature normally only found on higher end video cameras. This is especially useful for feature or short film production requiring multiple takes from the same mark or any dramatic, automatic zoom or focus shifts. Zoom and focus speeds are also manually adjustable.

16-LEVEL ADJUSTABLE ZOOM SPEED SETTING

The 16-level adjustable zoom speed setting is used during grip zoom operation and adds another level of flexibility to your shooting possibilities, especially for handheld camera moves. It's also possible to adjust the zoom speed of the handle section zoom lever in three steps, from Low to Medium to High.

The freedom of manual control.

The XL2 offers an almost unbelievable amount of manual control. With an unprecedented amount of fully adjustable custom presets, as well as Brightness Adjustment and White Balance functions, the XL2 is a revelation in artistic freedom and flexibility.

CINE-LOOK FUNCTIONS

The XL2 can shoot footage in a way that comes remarkably close to the look and feel of actual 35mm film. Simply shoot in 25p mode and adjust the following functions according to your creative direction.

1. Colour Hue
2. Colour Gain
3. Black Stretch

GAMMA

Set the Gamma mode to either Video / Normal or Cinema. When set to Cinema, the XL2 increases the dynamic range, reduces white-out in bright subjects and increases the grey scale in dark areas – this all combines to make your shots appear more filmic.

KNEE

Adjust the dynamic range at the high-brightness end of the spectrum in order to control the white-out in high-brightness areas. Select from High, Middle and Low. The Low setting will limit the extent of white-outs.

CORING

This function allows you to control the amount of subtle noise components present in your footage.

NR (NOISE REDUCTION)

Adjust the NR levels to suit your needs by selecting from one of five settings – Auto, Low, Middle, High or Off. In Auto mode the noise reduction is controlled in response to noise gain. Moving from Low to High also improves the S / N ratio.

COLOUR HUE

Refine the colours of your picture through the full spectrum of hues, from warm and reddish to cold and greenish.

SHARPNESS

Another essential tool for refining your shots during a shoot – this function allows you to change the resolution of an image to suit your preference for either a sharper or softer look.

COLOUR GAIN

This feature allows you to fully adjust the saturation of your footage, shifting the colours from oversaturated to black and white if desired.

BLACK STRETCH

This feature lets you adjust your subject's dynamic range on the low intensity side. Select from Stretch, Middle and Press. If Stretch is selected, the dynamic range is expanded so that the grey scale for black can be expressed – when Press is selected, the range is narrowed.

COLOUR MATRIX

Select from Video / Normal or Cine-Look. This feature also allows you to select the colour balance and match it with a predetermined Gamma characteristic. Selecting the Cine-Look mode will give a more distinct 'film' colour.

V DETAIL

Set the resolution in the vertical direction when shooting in 25p mode. You can choose between Normal and Low to adjust the sharpness of the image.

FILM GRAIN

Add that extra dimension to video footage that's been shot to look like film. The XL2 can add a simulated film grain to any shot for a rougher, more organic texture.

MANUAL FUNCTIONS

The XL2 features many more ways to control your images manually, eliminating the need for much of the expensive and time consuming post-production process required by many professional video camera users.

4. Red Gain
5. Green Gain
6. Blue Gain

INDEPENDENT R / G / B GAIN

This completely new feature allows you to independently adjust the white balance of the three primary colours. Red Gain can be tweaked from red to cyan, Green Gain from green to magenta and Blue Gain from blue to yellow. Adjustments made in-camera eliminate the need for significant post-production work.

MASTER PEDESTAL

The Master Pedestal of black serves as the video reference. You can now adjust the contrast in your images in-camera.

GAIN CONTROL

Adjust the sensitivity of each of the three CCDs from –3dB to +18dB in up to seven different steps.

SETUP LEVEL

The Setup Level function allows you to set the dynamic range of the picture that subsequently permits black-level adjustment of the video signal. This ultimately gives you the best shadow detail in any shooting situation and ensures proper focus, exposure and white balance.

SKIN DETAIL

Adjust five different values – Hue, Chroma, Area, Y-level and Detail Adjustment – independently or using the factory presets. Together, these allow you to detect skin areas and adjust their tones. This is useful in order to counteract or magnify the effects of lighting, skin colour, skin vibrancy and environment. With the XL2's detailed selection process none of the other areas will be affected – only the skin tones are adjusted.

Hue: This determines the hue of the detected skin colour area, from reddish to greenish – useful for selecting skin colours under fluorescent lights, at dusk or any other shooting conditions with different colour temperatures. The detected skin area is shown with a zebra pattern.

Chroma: This is used to determine the chroma saturation of the detected skin colour area that is essential for distinguishing between vibrant and pale skin colours. Once again the detected skin area is shown with a zebra pattern.

Area: The Area function adjusts the width of the detected skin colour's chroma from bright to dark. This is particularly useful for discerning between many similar skin colours.

Y-level: Y-level adjusts the brightness of the detected skin colour. This is used for distinguishing brighter skin colours from darker ones.

Detail Adjustment: This function softens the detected skin colour area. The available options are Off, Low, Normal and High. When Off is selected, no detail adjustment is made. When any of the other options are selected, a different degree of softness is applied to skin colour areas.

7. Skin Detail Off
8. Skin Detail High

1. White Balance of an indoor scene set to Indoor mode
2. White Balance of an indoor scene set to Outdoor mode
3. White Balance of an outdoor scene set to Outdoor mode
4. White Balance of an outdoor scene set to Indoor mode

MANUAL BRIGHTNESS ADJUSTMENT

Setting the brightness of each shot manually is easily done through three separate parameter controls on the XL2.

WHITE BALANCE

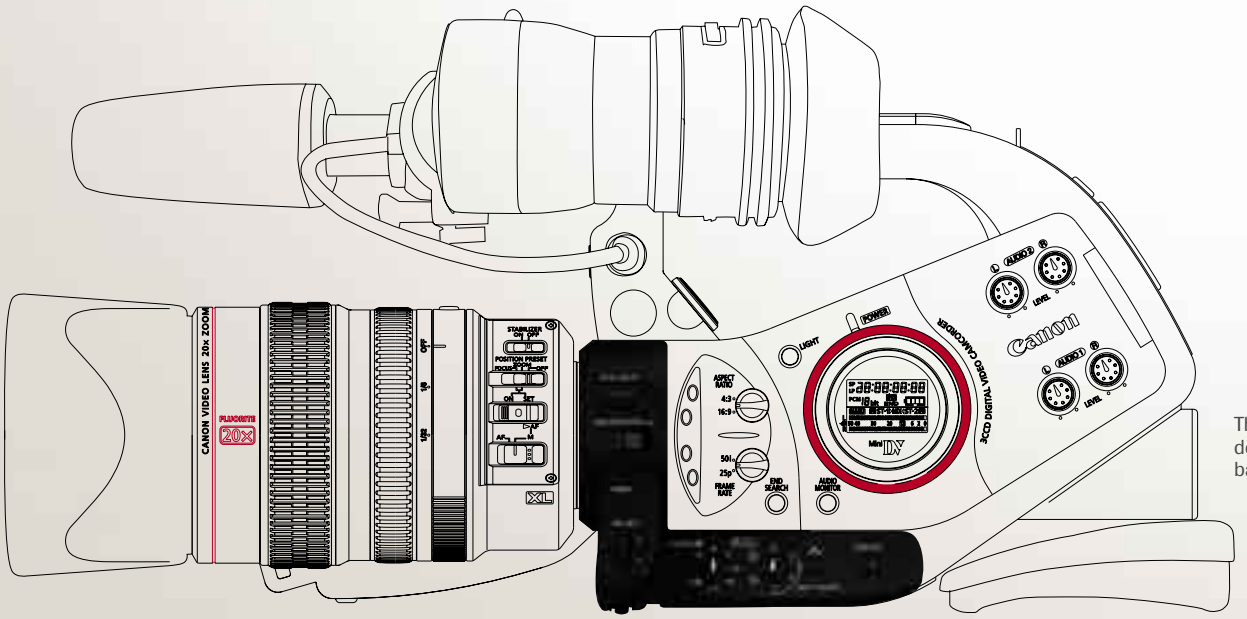
While the White Balance can be set to the factory presets of Auto, Outdoor (5600k colour temperature) or Indoor (3200k colour temperature), it's also possible to manually configure 'true white' at three different custom levels.

AE SHIFT

You can set the AE Shift function in 13 steps from +2.0 to –2.0, allowing you to move through exposures at a controlled rate. The screen can be at either a high or low key level depending on your preference.

AE LOCK

This feature allows you to manually set and lock the exposure. Once this has been done it is still possible to adjust shutter speed and aperture without further affecting the exposure.



The XL2 includes dedicated light balance controls.

The power of presets.

Not only does the XL2 give you a huge amount of manual control over your shooting parameters – it comes with a number of preset shooting programs and modes that allow you to focus on achieving your creative vision.

SHOOTING PROGRAMS

The XL2 has seven different programs that give you varying degrees of flexibility over your shots, yet always deliver the correct focus and exposure.

FULL AUTO MODE

Also called the Green Zone, and identified by the green rectangle on the Command Dial, this is perfect for general shooting. The camera handles all settings such as Shutter Speed, Aperture and White Balance automatically.

AUTO MODE

Similar to Full Auto mode, yet you can still use the manual functions to override and change the automatic camera settings.

SHUTTER PRIORITY (Tv MODE)

This mode is much the same as it is on Canon's 35mm SLRs, giving you some creative control while ensuring the correct exposure. In Tv mode, you can select a shutter speed from 1/6 to 1/16000 of a second.

APERTURE PRIORITY (Av MODE)

In Av mode, an aperture from f/1.6 to f/16 can be selected (up to f/11 when using the standard 20x Zoom lens).

MANUAL MODE

You have total control over all your shooting parameters in this mode, which is preferred by most users for its flexibility. Choose any combination of shutter speeds and apertures as well as setting the White Balance.

SPOTLIGHT

This mode is designed to avoid over-exposure of subjects that are illuminated against dark backgrounds. It does this by ignoring light measurements of the dark background and concentrating on the main subject. This is particularly useful for shooting people under a spotlight on a dark stage.

LOW LIGHT

This mode is newly added to the XL2 and reduces its shutter speed to between 1/6 and 1/49 of a second to allow the shooting of subjects in low light conditions.

5. Shutter Priority
6. Aperture Priority
7. Spotlight
8. Low light

The sound of artistic freedom.

The XL2 delivers all the audio results you could want – and it can all be configured manually for total creative control.

FOUR CHANNEL DIGITAL AUDIO

The XL2 records in digital stereo sound. Select from 16 bit audio (2 channels, 48 Khz) or 12 bit (4 channels, 32 Khz) and from Line or Mic level audio sources to ensure an accurate impedance match. You can monitor the levels on an illuminated VU metre equipped with a 24-segment peak holder, split into right and left – this can be viewed either on the side LCD or through the EVF.

MANUAL AUDIO CONTROL

The XL2 allows you to adjust the Left and Right channels separately, as well as control all four audio channels via separate dials on the body – rather than adjusting them in the LCD menu.

XLR CONNECTION AND PHANTOM POWER

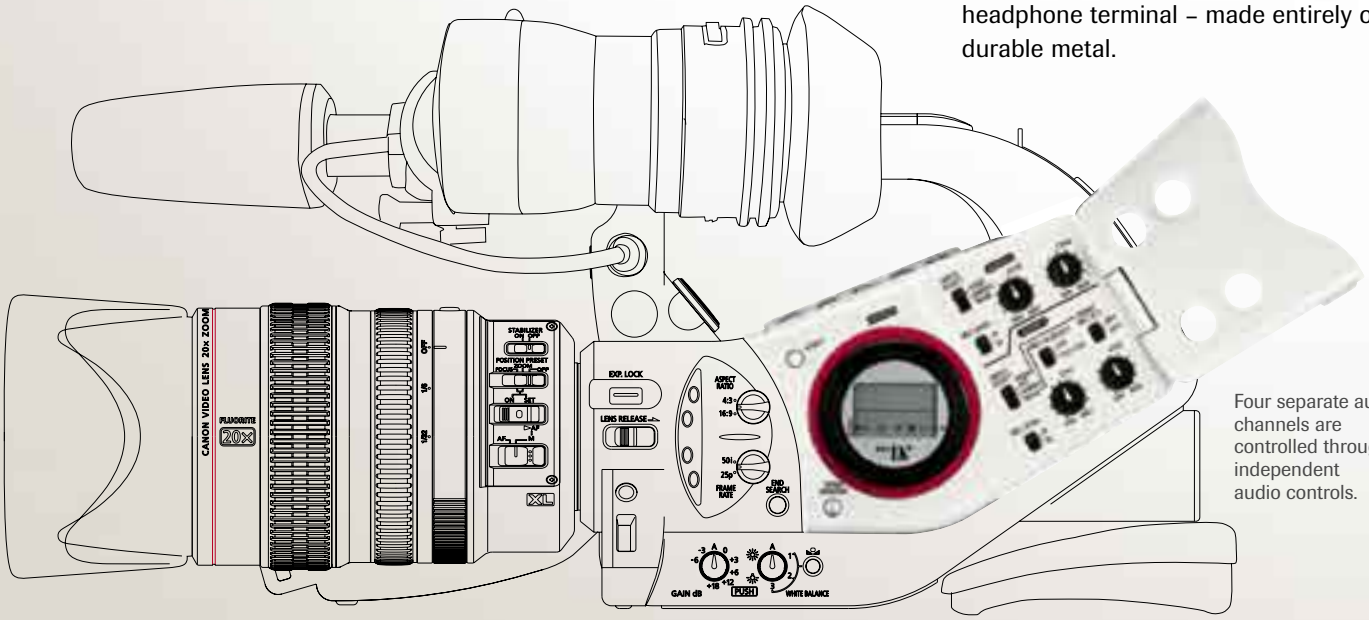
The XL2 is fitted with two built-in XLR terminals for use with professional audio equipment. It also features a BNC video connector for output to a professional video monitor (to check image and composition). The XL2 can supply 48V Phantom Power through the XLR terminals for battery-less microphones.

HIGH PERFORMANCE MICROPHONE

The XL2 comes with a high performance MS system Stereo Electrolet Capacitor microphone as standard for excellent frequency response performance.

HEADPHONE JACK

Check your volume and balance during recording with the adjustable volume headphone terminal – made entirely of durable metal.



Four separate audio channels are controlled through the independent audio controls.

More control for more creativity.

There are a number of auxiliary modes and functions that give you even more creative control and help make the XL2 a complete high-performance package.

1. Zebra Pattern
2. Clear Scan

CENTRE MARKER
When turned on, the centre marker appears as a small white cross in the middle of the LCD to help position your shots.

ZEBRA PATTERN
Helps you avoid over-exposing a shot by highlighting overexposed areas with a diagonal zebra pattern on the LCD. The level can be set to one of five steps in five percent increments from 80-100%.

CLEAR SCAN
Allows you to eliminate flickering when shooting CRT screens of a different frequency from the video camera – especially PCs and televisions. This can only be used in Shutter Priority (Tv) or Manual mode.

CUSTOM KEYS
The XL2 has two Custom Keys on the main body that you can customise to use as shortcuts for a variety of camera functions – independently of any other menu settings. When in Camera mode, choose from: Time Code, Index Recording, Zebra Pattern, VCR Stop, Onscreen, Handle Zoom Speed and Level Meter. When in VCR mode, you can select: Time Code, Onscreen, Data Code or Level Meter. The buttons have different profiles to allow for sightless operation during shooting.

SUPPORTING MODES

The XL2 has three additional functions that support your creative control.

INTERVAL SHOOTING
Allows continuous recording with intervals. There are 16 different combinations that can be achieved by selecting from four interval lengths – 30s, 1min, 5min, 10min – and four recording times – 0.5s, 1s, 1.5s, 2s.

SELF-TIMER
The self-timer on the XL2 can be set up to ten seconds, or as little as two seconds using the remote controller.

STANDBY
The dedicated Standby Switch / Power Save function is activated if recording is paused longer than five minutes. In Power Save mode you can either choose to power down the whole camera or only the recording section, removing the recording heads from the tape.

Fully prepared for anything.

The XL2 is the perfect camera for so many shooting applications because of its widely adaptable functionality. From simple handheld shots to complicated multi-camera setups, the XL2 can handle it all with consistency and exceptionally high-performance.

SMPTE TIME CODE

The XL2 achieves full professional utility with SMPTE time code capability – the standard system for broadcast use – and is available in three different options:

Free Run: Essential for synchronising between tapes on multi-camera shoots, this feature allows the counter to run regardless of the power / recording settings.

Rec Run: The DV convention, this feature has the counter running only during recording – the continuous time code is recorded onto the tape.

Preset Setting: With this option you can set the counter to whatever value you like – this is particularly useful for ensuring counter continuity from one tape to the next.

EBU COLOUR BAR AND TEST TONE

In addition to the EBU colour bar that allows post-production colour synchronisation, the XL2 also features a 1Khz test tone at either –12 or –20 dB.

INDEX STAMP

An essential feature for most filmmakers, the XL2 offers more than just the basic index signal. The Memory function is not necessary to record with an Index Stamp, nor is it recorded directly onto the picture.

REC SEARCH AND REVIEW

The Rec Search feature automatically finds the start of each new recording to ensure continuous sequential recording. The Rec Review function allows you to review your footage in the camera's LCD / EVF.

USER BIT SETTING

Instead of a clapperboard, this feature can display and record scene data using a hexadecimal system of eight figures (numbers from 1 to 9 and letters from A to F) that can be set in four groups of two.

IEEE1394 CAMERA CONTROL (HDD)

Connect the XL2 directly to an HDD recorder using the built-in IEEE1394 interface and AV/C protocol.
This also permits multi-camera setups with remote operation from one XL2 to others connected to it.

DV DIRECT TO PC RECORDING

The XL2 can be connected directly to a PC via its IEEE1394 connection. This allows for remote operation as well as recording direct to the PC's hard disk (using free DV-PC Recorder software available for download from Canon's website).

DV STREAMING WITH FIREWIRE IEEE1394

Using its FireWire IEEE1394 connection, the XL2 permits streaming data transfer without any degradation in picture or sound quality.

Designed for freedom.

The popularity of the XL2's predecessor, the XL1s, was in large part due to its 'open architecture' skeletal design. The XL2 started with the same design philosophy and added improvements to create a completely modular video camera package to suit your needs. For maximum strength and portability, it is constructed from a high-tolerance impact-resistant magnesium alloy frame with a built-in shoulder support and distinctive pearl white finish.

LCD / FULLY ADJUSTABLE VIEWFINDER

The XL2's viewfinder (EVF) is fully adjustable (left, right, forwards and backwards) with a 200,000 pixel, 2" LCD that displays 86% of the shooting scene. This high-resolution screen can be adapted to view Pro-Quality 16:9 (shown in letterbox format on the EVF). The EVF also features three indicator lights – Rec, Shutter and Gain – to deliver instant feedback on every shot. The LCD meanwhile, is also fully adjustable for brightness, colour darkness, sharpness and contrast.

LCD SIDE DIAL DISPLAY

Another feature carried over from the XL1s is the distinctive LCD side dial. With its audio level meter integrated into the inner dial display, it is perfectly situated for the easy monitoring of audio levels during filming.

LATERAL / HORIZONTAL VIEWFINDER MOVEMENT

The XL2 is comfortable for anybody to use. It is easily modified for different usage setups and maintains the same popular built-in shoulder support, underneath the tilted rear body, as its predecessor.

PROFESSIONAL CONNECTIVITY

The XL2 has two built-in XLR ports that enable high-performance microphones to be connected directly to the video camera (as well as offering phantom power capability). It also comes with a BNC jack and an S-Video jack as standard. The BNC jack allows for a co-axial cable connection direct to a monitor, so you can check the complete image set-up and composition, while the S-Video jack is for output to conventional TV sets.

Video can be monitored directly on the 2" LCD by flipping back the fully adjustable viewfinder (EVF).

The map to freedom.

LEFT SIDE

A. Panel

1. EVF display selector
2. Custom keys
3. Custom present keys on/off and selector
4. Tape compartment eject button

B. Panel

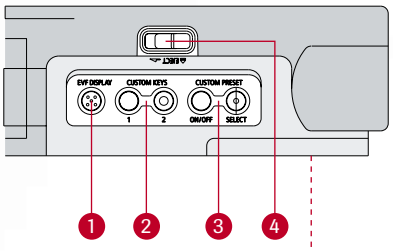
5. Standard viewfinder plug
6. AE shift dial
7. Viewfinder FU-1000 plug
8. Focusing ring
9. Zooming ring
10. ND filter select ring
11. IS on/off switch
12. Zoom/focus preset switch
13. Auto/manual focus switch
14. Zoom/focus preset on/set switch
15. Exposure lock button
16. Lens release slide
17. Iris select, menu navigation and aperture control wheel
18. Menu button
19. Aspect ratio (4:3/16:9) selector switch
20. Gain selector dial
21. Frame rate (50i or 25p) selector switch
22. White Balance selector dial
23. End search
24. White Balance set button
25. Stand-by button
26. Audio monitor on/off switch
27. Audio level meter and manual audio level indicators
28. Multifunctional LCD display
29. LCD display backlight switch

C. Panel

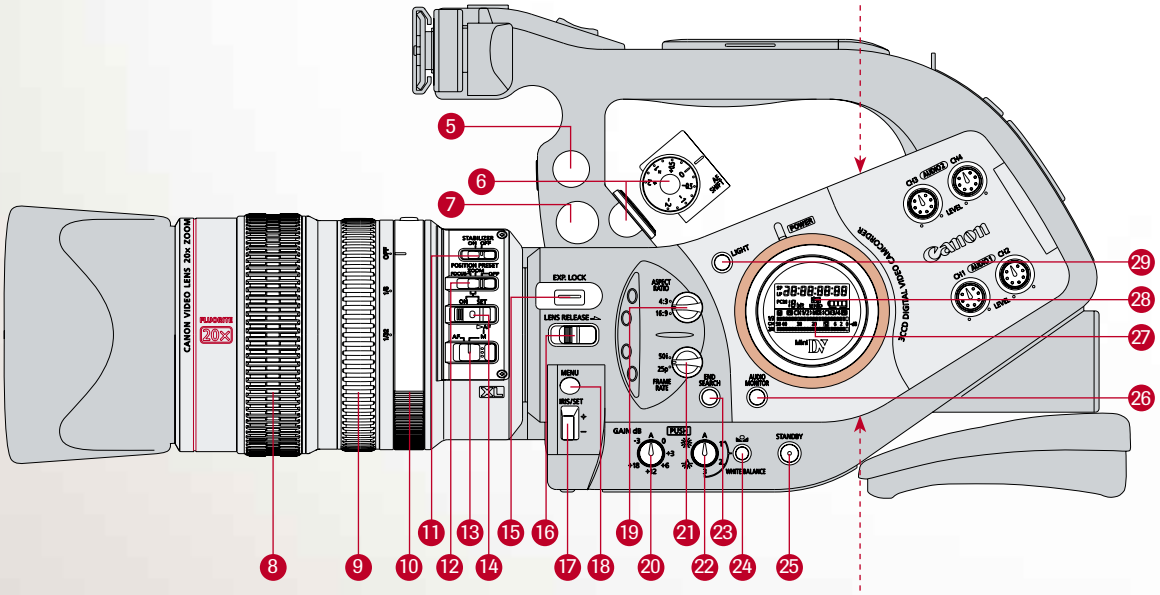
30. Rec search +
31. Rec search –
32. Film grain/color bars select button
33. Film grain/color bars on/off button
34. Audio 2 input selector switch
35. Selector switch audio control (auto or manual) for audio 2
36. Audio 1 input selector switch
37. Selector switch audio control (auto or manual) for audio 1
38. Rec channel selector switch
39. Audio level dial for audio 1 left
40. Audio level dial for audio 1 right
41. Front mic/attachment mic selector switch
42. Audio level dial for audio 2 left
43. Audio level dial for audio 2 right

LEFT SIDE

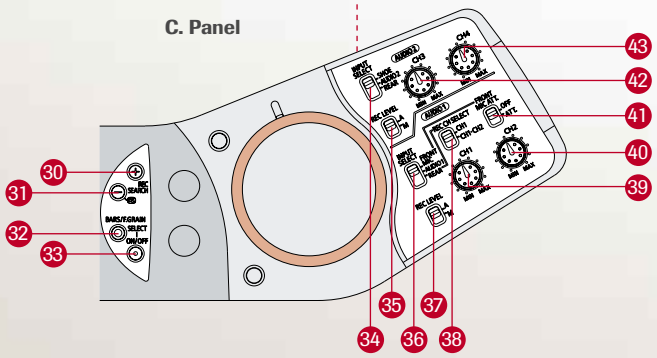
A. Panel



B. Panel



C. Panel



BACK

44. Headphone volume level control
45. Headphone plug
46. DV in/out plug
47. LANC plug
48. 48v phantom power on/off for channel 1 and 2
49. XLR input for channel 1 and 2 on/off
50. Shutter speed control
51. XLR channel 1 input
52. XLR channel 2 input

TOP

53. Record
54. Fast forward
55. Play
56. Rewind
57. Stop
58. Pause
59. Top section lock button
60. Handle zoom lever
61. Handle record/pause button
62. Advanced accessory shoe

RIGHT SIDE

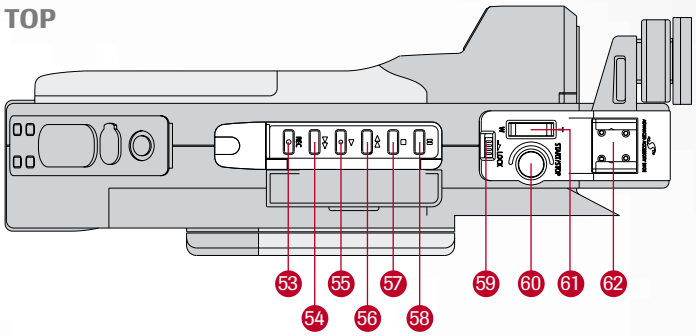
D. Panel

63. S-video terminal
64. RCA/BNC selector
65. Audio 1 RCA terminal
66. Audio 2 RCA terminal
67. Video terminal (RCA)
68. Video terminal (BNC)
69. Battery release button
70. Battery compartment
71. Tape compartment
72. Memory battery compartment
73. Front mic plug

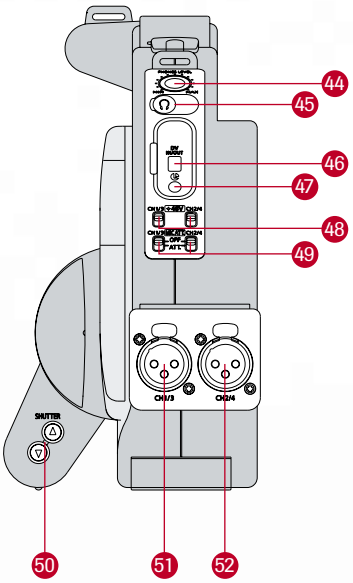
E. Panels

74. Main record/pause button
75. Constant/variable zoom speed select switch
76. Zoom speed select switch
77. Main zoom lever

TOP

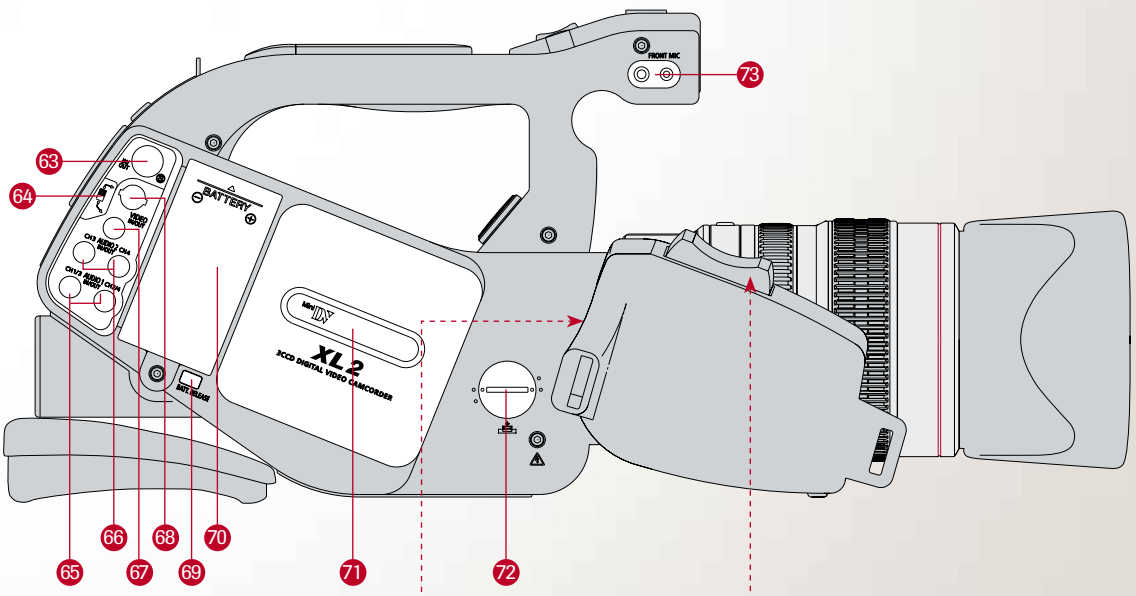


BACK

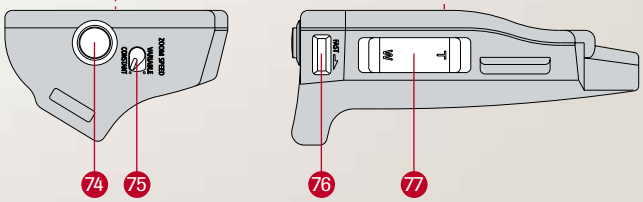


RIGHT SIDE

D. Panel



E. Panels



Expand your repertoire.

The creative possibilities are virtually endless with the XL2's wide range of in-box and optional accessories.

With the EF Adapter (pictured here with the EF 600mm f/4L IS USM lens), the XL2 is compatible with a huge range of professional L-series lenses.

OPTIONAL ACCESSORIES

Video Light
VL-10Li*

Dual Battery Charger/Holder
CH-910

Battery Pack
BP-945/930

Car Battery Charger
CB-920

Filter Set
FS-72U

Video (Flash) Light
VFL-1
VL-3

Directional Stereo Microphone
DM-50

Microphone Adapter
MA-300

Monochrome CRT Viewfinder
FU-1000

Tripod Adapter
TA-100

Zoom Remote Controller
ZR-1000

Shoe Adapter
SA-1

Hard Case
HC-3200

Mini DV 60/80 Cassette

DV Cleaning Tape

KIT ACCESSORIES

DC Coupler
DC-920

Stereo Microphone

Viewfinder

Battery Charger
CA-920

20x XL Zoom Lens

AV Cable

XL2 Body

Battery Pack
BP-930

Manual 16x XL Zoom Lens

S-Video Cable

Adapter Holder

Wide-Angle 3x XL Zoom Lens

Remote Controller
WL-D4000

20x XL Zoom Lens

Lens Hood

Neck Strap

Extender XL 1.6x

EF Adapter XL

*Requires separately sold BP-900 series battery packs and CA-910/C8-920 battery chargers.

XL2 Digital Video Camera Specifications

CAMERA SECTION

CAMERA

Imaging Device	3x1/3" CCD (3 CCD Horizontal PixelShift)
Pixel Count (per CCD)	Total – 800,000 Effective in 4:3 – 410,000 (720x576 pixels) Effective in 16:9 – 550,000 (962x576 pixels)
Colour Separation	Prism and Dicroic filter
Digital Quantisation	8 bits A/D
Signal Composition	PAL standard colour video signal
Scan Method	625 lines, 50 interlaced or 25 progressive
Auto Exposure Modes	Full Auto, Auto, Spotlight,Tv (Shutter Priority), Av (Aperture Priority), Low Light, Manual
Shooting Modes	50i and 25p

CAMERA SETTINGS

Picture Quality Adjustment	
Customizable Cine Look	Colour matrix, Gamma, Knee, Black Stretch, Vertical Detail, Coring, Sharpness, Noise Reduction, Colour Gain, Hue, Film Grain
Master RGB	Red: -6 to +6; Green: -6 to +6; Blue: -6 to +6
Setup Level	-6 to +6
Master Pedestal	-6 to +6
Skin Tone Detail	Hue, gain, area and Y level
Gain	7 steps (-3/A/0/+3/+6/+12/+18dB)
Custom Preset	3 presets
Custom Key	2 custom keys
Light Metering Method	Center-bottom-weighted, Evaluative Photometry
Evaluation	256 segment evaluation metering; Spotlight Mode
Minimum Illumination	0.8 lux (in manual)
Shutter Speed (Tv Mode)	12 levels from 1/6 to 1/16000 sec.
Slow Shutter	1/6 to 1/49 sec
Aperture (Av Mode)	8 steps from F1.6 to close
AE Level Shifting	AE shift dial operation (+/-2 levels) (Auto Mode,Tv Mode, Av Mode only)
AE Lock	Exp.Lock button operation (Auto Mode,Tv Mode, Av Mode only)
White Balance	Auto, Set (3 settings are available), Preset (indoor,outdoor)
16:9 Ratio	Area marker display: Displaying a letter box display for 16:9 ratio on the 4:3 ratio screen. Recording Mode: True 16:9 format recording
Zebra Pattern	5 levels: 100%, 95%, 90%, 85%, 80%
Clear Scan	50–200.7 hz
Search	Date search, End search, Index search
Index Recording	Recorded on tape
Self-timer	10 sec/Remote control 2 sec.
Interval Timer	4 interval times and 4 record times
Power Save	Shut-off/VCR stop

LENS

Type	20x Zoom XL 5.4 – 108mm L IS
Lens Mount Method	Bayonet mount (XLmount system) EF Lens (with optional EF adapter XL) Focal length increases approx. 7.8x for EF-Lens
Zooming Speed	Handle Zoom – Constant or 16 step variable Grip Zoom – Constant speed (3 speed H/M/L)
Built-in Filter	ND filter, built-in, 2 levels: Light intensity approx. 1/6 (density 0.8), Light intensity approx. 1/32 (density 1.5)
Image Stabilizer	Yes – Optical (using VAP/SuperRange system support)
Filter Diameter	72mm P0.75mm
AF (Auto Focus)	TTL-video signal detection type AF
AF Operating Range	Close-up to infinity (depending on lens used) (20mm to infinity using 20x Zoom XL5.4 – 108mm)
MF (Manual Focus)	By using lens focus ring when AF is off
Focus Override	Temporary Focus Override without turning the AF off
One Push AF	Slide switch operation

VIEWFINDER

Type	Electronic colour viewfinder
Image Display	2.0" TFT colour LCD, approx. 200,000 pixels
Eyepoint	120mm (no eyepoint adjustment)
Adjustment	+0.5 – -4.0 diopter EVF brightness, contrast, colour and sharpness
Indicators	Shutter, Rec and Gain Up
Display	On/Partly Off/Off

RECORDING SECTION

GENERAL

Format	MiniDV
Recording Method	Two rotating heads, helical scan azimuth recording Consumer digital VCR SD specifications Complies with PAL system (625 lines, 50 fields)
Tape Speed	Approx. 18.83 mm/sec (SP Mode) Approx. 12.57 mm/sec (LP Mode)
Tape	1/4" miniDV cassettes with DV mark
Cassette Size	66.0x48.0x12.2mm
Recording Time	80 min with 80 min tape (SP Mode) 120 min with 80 min tape (LP Mode)
FF/REW Time	Approx. 2 min 20 sec (using 60-min tape)
Time Code	SMPTE Time Code

AUDIO

Sampling Frequency	16-bit 48kHz 2ch 12-bit 32kHz 4ch (synchronous 4 channel recording)
Maximum Sensitivity	-78 dBv
Signal Level	-54 dBv
Microphone	High-performance MS system stereo electric capacitor
Recording Level and Balance	Auto/Manual
XLR Audio Input	2ch: standard with 48V Phantom Power Supply 4ch: MA-300 (optional)

SIGNAL INPUT

DV In Signal	IEEE 1394-AV/C protocol
Video In	Signal level 1VP-p/75Ω (composite)
S-Video In	C: 0.3 1VP-p/75Ω, Y: 1.0 1VP-p/75Ω
Audio In	-10 dBv/47kΩ (LINE), -54 dBv/600Ω (MIC ATT) -55 dBv/600Ω (MIC), unbalanced

SIGNAL OUTPUT

DV Out Signal	IEEE 1394-AV/C protocol
Video Out	Signal level 1VP-p/75Ω (composite)
S-Video Out	C: 0.3 VP-p/75Ω, Y: 1.0 VP-p/75Ω
Audio Out	10 dBm (47kΩ load)/3kΩ, unbalanced

OTHERS

DV Input/Output Terminal	Special 4-pin (IEEE 1394 compatible)
S-Video Signal Terminal	4-pin mini-DIN
Video Input/Output Terminals	RCA pin jack BNC jack
Audio Input/Output Terminals	RCA terminal jack (L/R) 2 systems: input/output switching XLR pin jack (3-pin jack) 2 systems: balanced
External Mic Terminal	2x XLR with 48v Phantom Power Supply
Headphone Jack	3.5mm dia. Stereo mini-jack
Edit Terminal	LANC compatible

GENERAL SECTION

Power Supply Voltage	7.2v DC
Power Consumption	7.1w
Operating Temperature	0–40°C
Dimensions (W x H x D)	225 x 220 x 496mm
Weight (camera only)	2410g
Weight (fully equipped)	3545g
Continuous Recording Time	BP-930 – 155 min BP-945 – 230 min
Chassis	Magnesium Alloy

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